

9900312

THIE UNITED SHATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

TI Seed Co.

MACCOUNT, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HERS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITIORY AS PROVIDED BY LAW, THE LIT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR TING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE NRPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'TJS 410'

In Testimony Therest, I have hereunto set my hand and caused the seal of the Flant Inviety Protection Office to be affixed at the City of Washington, D.C. this fourteenth day of June, in the year of our Lord two thousand one.

Allert

alank Post

Acting Commissioner Plant Variety Frotection Office Agricultural Marketing Service griculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

| AP PLICATION FOR PLANT VARIETY PROTECTION (Instructions and information collection burden statement | CERTIFI t on revers | e) (7 U.S.C. 2421). | Information is held confidential u | ntil certificate | is issued (7 U.S.C. 2426). |
|--|----------------------------------|---|---|------------------|---|
| 1. NAME OF OWNER | | | 2. TEMPORARY DESIGNATION EXPERIMENTAL NAME | ON OR | 3. VARIETY NAME |
| T J Seed Co. | | | | | TJS 410 |
| 4. AIDDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Coun | ntry) | | 5. TELEPHONE (include area | code) | FOR OFFICIAL USE ONLY |
| 6464 Liv 418 Ludlow, MO 64656 | | | (660) 738-474 | | PVPO NUMBER |
| | | | 6. FAX (include area code) | | 9900312 |
| | | | (660) 646-3 | 568 | FILING DATE |
| 7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) | 8. IF INC | ORPORATED, GIVE OF INCORPORATION | 9. DATE OF INCORPORATIO | IN | /// |
| Corporation | Missouri | | 12-21-98 | | 6/4/99 |
| 10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN TH | IIS APPLICAT | ION. (First person listed will re | ceive all papers) | | FILING AND EXAMINATION FEES: |
| Brian Thompson, Pres. 6464 Liv 418 Ludlow, MO 64656 | | | | | FE \$ 2450 R DATE 1496 |
| | | | | . | C CERTIFICATION FEE: |
| | | | | | B \$ 300 00 00 00 00 00 00 00 00 00 00 00 00 |
| 11. TIELEPHONE (Include area code) 12. FAX (Include area code) | | 13. E_MAIL | | 14. CROP | KIND (Common Name) |
| (660) 738-4746 | | grtech@gree | enhills.net | So | oybean |
| 15. GENUS AND SPECIES NAME OF CROP | | 16. FAMILY NAME (Botani | cal) | 17. IS THE | E VARIETY A FIRST GENERATION D? |
| Glycine max L. | | Leguminos | ae ' | | ☐ AE2 ☐KNO |
| 18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Folio | w instructions | on 19 DOES THE CERTIFIED | | OF THIS VAR | RIETY BE SOLD AS A CLASS OF triety Protection Act) |
| a. Exhibit A. Origin and Breeding History of the Variety | | | YES (If "yes", answer items 20 and 21 below) | I | NO (If "no," go to item 22) |
| Exhibit B. Statement of Distinctness Exhibit C. Objective Description of Variety | | 20. DOES THE | OWNER SPECIFY THAT SEED | OF THIS VAF | RIETY BE LIMITED AS TO NUMBER |
| df. | | 1 _ | OF GENERATIONS? | | |
| e. | ated varieties | 21 15 "YES" TO | LITEM 20 WHICH CLASSES OF | PRODUCTION | ON BEYOND BREEDER SEED? |
| verification that tissue culture will be depositied and maintained in a reposition) 9. Fifting and Examination Fee (\$2,450), made payable to "Treasurer of States" (Mail to the Plant Various Protection Office) | • | i | | TERED | CERTIFIED |
| States" (Mail to the Plant Variety Protection Office) 22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBI | <u> </u> | ED 23. IS THE VAR | RIETY OR ANY COMPONENT OF | THE VARIE | TY PROTECTED BY INTELLECTUAL |
| FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR U O'THER COUNTRIES? | ISEO IN THE I | U.S. OR PROPERTY | RIGHT (PLANT BREEDER'S RI | GHT OR PA | Not at this |
| ☐ YES ☑ NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space in | TRANSFER, | OR USE IF YES, PLE | YES ASE GIVE COUNTRY, DATE OF E NUMBER. (Please use space | FILING OR | ISSUANCE AND ASSIGNED reverse.) |
| The owners declare that a viable sample of basic seed of the variety will be for a luber propagated variety a tissue culture will be deposited in a public report. | mished with a | application and will be replants | hed upon request in accordance | with such reg | ulations as may be applicable, or |
| The undersigned owner(s) is(are) the owner of this sexually reproduced or tut and is entitled to protection under the provisions of Section 42 of the Plant Va Owner(s) is(are) informed that false representation herein can jeopardize prof | ber propagate riety Protectio | d plant variety, and believe(s) n Act. | | niform, and s | table as required in Section 42, |
| SIGNATURE OF OWNER | | SIGNATURE O | FOWNER | <u> </u> | |
| Dria Hospin | _ | | <u>, ,</u> | <u> </u> | <u> </u> |
| NAME (Please print or type) | - | NAME (Please | print or type) | | |
| Brian Thompson | | | | | 1 |
| CAPACITY OR TITLE President DATE | 2.90 | CAPACITY OR | TITLE | | DATE |

EXHIBIT A. Origin and Breeding History of the Variety

Soybean Variety TJS 410.

Variety TJS 410 was isolated from Applicant's cultivated field of Edison soybeans in 1994. TJS 410 has been propagated annually since 1995 and has undergone four years of testing. TJS 410 has been observed by the breeder to be uniform and stable for all plant traits from generation to generation, with no evidence of variants.

225 acres of seedstock are scheduled to be under cultivation in the summer of 1999.

EXHIBIT B. Statement of Distinctness

Soybean Variety TJS 410.

Variety TJS 410 was isolated from a cultivated field of Edison soybeans. Edison is an indeterminate bean with purple flowers.

Variety TJS is a determinate bean, 8-10 inches taller than Edison, with larger leaves, white flowers, brown pubescence and yellow seeds.

UNITED STATES DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE BELTSVILLE, MARYLAND 20705

OBJECTIVE DESCRIPTION OF VARIETY SOYBEAN (Glycine max (L.)Merr.)

| Name of Applicant: T J Seed Co. | | | Variety Name: TJS 410 | | | | |
|---|---|--|---|---|--|------------------------------------|--|
| | | Experimental Name (if applicable): (very important if one has ever been used): | | | | | |
| Address (Street and No., City, State, Zip Code): 6464 Liv 418 Ludlow, MO 64656 | | | | PLEASE DO NOT WRITE IN THIS SPACE FOR PVP OFFICE USE ONLY PVP NUMBER: | | | |
| For each characteristic, please place the number of the character state that best represents your variety in the corresponding box. If you feel the best choice is not listed, write in what you believe to be the most accurate description. | | | | | | best represents isted, write in | |
| 1. [SSHP]:SEED SHAPE | 1=[SPHR] spherical:(L/W, L/T, and T/W ratios = < 1.2) | sph fla rat | 2=[SPHF] spherical- flattened:(L/W ratio > 1.2; L/T ratio < 1.2 | | 3=[ELON] elongate:(L/T ratio > 1.2; T/W < 1.2 | fl | [ELFL] elongate- attened:(L/T tio > 1.2; T/W > 2) |
| 2. [SCL]:SEED COAT COLOR: 1 | | | | | | | |
| 3. [LU]:SEED COAT LUSTER 1 1=[DL]dull 2=[SH]shiny | | | | | | | |
| 4. [SSZ]:SEED SIZE: 1 2 grams/100 seeds | | | | | | | |
| 5. [HCL]:HILUM COLOR: 6 | | | | | | | |
| 6. [CCL]:COTYLEDON COLOR 1 = [YEL] yellow 2 = [GRN] green | | | | | | | |
| 7. [PA]:SEED PROTEIN PEROXIDASE ACTIVITY 1=[LO]low 2=[HI]high | | | | | | | |
| 8. [P]:SEED PROTEIN ELECTROPHORETIC BAND 1=[A]Type A 2=[B]Type B | | | | | | | |
| 9. [HC]:HYPOCOTYL COLOR | 1=[GRN]green ('Evans'; 'Davis') | br co | [GB]green with onze band below tyledons Woodworth'; 'racy') | | 3=[LPR]light purple below cotyledons ('Beeson'; Pickett 71') | | 4=[DPR] dark purple extending to unifoliolate leaves (Hodgson'; 'Coker Hampton 266A') |

| 10. [SP]:LEAFLET SHAPE | | | | | |
|--|--|--|--|--|--|
| 3 1=[LN]lanceolate 2=[OL]oval 3=[OV]ovate 4=[OTH]other (specify) e.g., [CB]=oblowing [EP]=elliptical | | | | | |
| 11. [FCL]:FLOWER COLOR | | | | | |
| 1=[WHI] white 2=[PUR] purple 3=[WPT] white w/purple throat | | | | | |
| 12. [PCL]:POD COLOR | | | | | |
| 2 1=[TAN]tan 2=[BRN]brown 3=[BLA]black | | | | | |
| 13. [PBC]:PLANT PUBESCENCE COLOR | | | | | |
| 2 1=[GRY]gray 2=[BRN]brown 3=[TWN]tawny 4=[LTN]light tawny | | | | | |
| 14. [PHB]:PLANT HABIT | | | | | |
| 1 1=[DET]determinate ('Gnome'; 'Braxton') 2=[SDT]:semi-determinate ('Will') 3=[IND]indeterminate ('Nebsoy'; 'Improved Pelican') 4=[INT]:intermediate | | | | | |
| 15. [MAT]:MATURITY GROUP | | | | | |
| 7 1=000 2=00 3=0 4=I 5=II 6=III 7=IV 8=V 9=VI 10=VII 11=VIII 12=IX 13=X | | | | | |
| 16. [MATS]:MATURITY SUBGROUP (early) 1 2 3 4 5 6 7 8 9 (late) | | | | | |
| 17. DISEASE REACTION (Enter 0=not tested; l=susceptible; 2=resistant; 3=tolerant) | | | | | |
| BACTERIAL DISEASES | | | | | |
| 0 [BCPS]:Bacterial Pustule (Xanthomonas campestris pv. glycines (Nakano) Dye) | | | | | |
| [BCBL]:Bacterial Blight (Pseudomonas syringae pv. glycinea (Coerper) Young, Dye, & Wilkie | | | | | |
| [WDFR]:Wildfire Blight (Pseudomonas syringae pv. tabaci (Wolf & Foster) Young, Dye, & Wilkie) | | | | | |
| FUNGAL DISEASES | | | | | |
| 0 [BRSP]:Brown Spot (Septoria glycines Hemmi) | | | | | |
| [FGEY]: Frogeye Leafspot (Cercospora sojina Hara) | | | | | |
| [FG01] race1 0 [FG02] race2 0 [FG03] race3 0 [FG04] race4 0 [FG05] race5 0 [FG06] race5 0 [FG00]: other (please specify | | | | | |
| | | | | | |

[TRSP]: Target Spot (Corynespora cassiicola (Berk. & Curt.) Wei) 9900312 [DYML]:Downey Mildew (*Peronospora trifoliorum* var. manchurica (Naum.) Syd. ex Gäum.) SOYBEAN "C": EXHIBIT Glycine max (L.) Merr. (page 3 of 4) (Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant) [PWML]: Powdery Mildew (Microsphaera diffusa Cke. & Pk.) [BRSR]: Brown Stem Rot (Phialophora gregata (Allington & Chamberlain) W. Gams) [STCR]:Stem Canker (Diaporthe phaseolorum (Cke.& Ell.) Sacc. var. caulivora Athow & Caldwell) [PSBL]: Pod and Stem Blight (Diaporthe phaseolorum (Cke. & Ell.) Sacc. var. sojae (Lehman) Wehm.) [PRST]: Purple Seed Stain (Cercospora kikuchii (T. Matsu. & Tomoyasu) Gardner) [RZRT]: Rhizoctonia Root Rot (Rhizoctonia solani Kühn) [PYPH]: Phytophthora Root Rot (Phytophthora megasperma Drechs. f. sp. glycinea Kuan & Erwin) [PY01]:race 1 [PY02]:race 2 [PY03]:race 3 [PY04]:race 4 [PY05]:race 5 [PY06]:race 6 [PY07]:race 7 [PY08]:race 8 [PY09]:race 9 [PY10]:race 10 [PY11]:race 11 [PY12:]race 12 [PY13]:race 13 [PY14]:race 14 [PY15]:race 15 0 [PY18]:race 18 0 [PY19]:race 19 [PY16]:race 16 [PY17]:race 17 [PY20]:race 20 0 [PY22]:race 22 0 [PY23]:race 23 0 [PY24]:race 24 [PY21]:race 21 [PY25]:race 25 [PY26]:race 26 [OTHD]:other (please specify) VIRAL DISEASES [BDBL]: Bud Blight (Tobacco Ringspot Virus) [BYMO]: Yellow Mosaic (Bean Yellow Mosaic Virus)

| [CWCV]:Cowpea Mosaic (Cowpea Chlorotic Virus) | 9900312 |
|---|-------------|
| [PDML]:Pod Mottle (Bean Pod Mottle Virus) | |
| [SDMT]: Seed Mottle (Soybean Mosaic Virus) | ; ; |
| NEMATODES | |
| [SYCY]:Soybean Cyst Nematode (Heterodera glycines Ichinohe) | |
| 0 [SY01]:race 1 0 [SY02]:race 2 1 [SY03]:race 3 0 [SY05]:race 5 | |
| SOYBEAN EXHIBIT "C": Glycine max (L.) Merr. (page 4 of 4) | |
| (Enter 0=not tested; 2=resistant; 3=tolera | |
| [SY06]:race 6 [SY09]:race 9 [SY14]:race 14 (formerly race 4) | |
| [SY0o]:other race (specify) | |
| [LANC]:Lance Nematode (Hoplolaimus columbus Sher) | |
| [RTKN]:Southern Root Knot Nematode (Meloidogyne incognita (Kofoid & White |) Chitwood) |
| [NTKN]:Northern Root Knot Nematode (Meloidogyne hapla Chitwood) | |
| [PTKN]: Peanut Root Knot Nematode (Meloidogyne arenaria (Neal) Chitwood) | |
| RENM]:Reniform Nematode (Rotylenchus reniformus Linwood & Olivera) | |
| [OTHD]:other (specify | , |
| | |
| 20. PHYSIOLOGICAL RESPONSES: | |
| [CHLO]: Iron Chlorosis on Calcareous Soil | |
| other (please specify) | |

| 7 | 0300312 |
|--|---|
| . INSECT REACTIONS: | (Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant) |
| 0 [MXBB]: Mexican Bean Beetle (Epilachna varivestis) | |
| 0 [POTH]:Potato Leaf Hopper (Empoasca abae) | |
| [OTHI]: other (please specify |) |
| HERBICI | DES |
| 2. HERBICIDE RESISTANCE: | (Enter 0=not tested; 1=susceptible; 2=resistant; 3=tolerant) |
| 0 [MEZN]:Metribuzin | |
| [SULF]:Sulfonylurea | |
| [RNDP]:Roundup | |
| [OTHH]:other (please specify | |
| ADDITIONAL IN | FORMATION |
| lease add <u>any</u> additional information characteristic ertinent. This information may be continued on add | c of your variety that you feel is ditional pages and/or in the exhibit D. |
| | |
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EXHIBIT D. Additional Description of the Variety

Soybean Variety TJS 410

In Exhibit C we have identified Variety TJS 410 as susceptible to Phytophthora root rot races 1 and 3, and Soybean Cyst Nematode race 3.

This does not mean that variety TJS 410 is any more susceptible to these problems or is affected any more substantially than other varieties of similar maturity. Rather, we do not consider TJS 410 to be immune to these problems. Accordingly, we have elected to be conservative and have identified the line as "susceptible".

The oil content of the seed based on the dry weight is 22.7%.

The protein content of the seed based on the dry weight is 39.6%.

TJS 410 is an early group IV variety.

REPRODUCE LOCALLY. Include form number and edition date on all reproductions.

| U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE | The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995. | | | | |
|---|--|--|--|--|--|
| EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP | Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426). | | | | |
| 1. NAME OF APPLICANT(S) | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER | 3. VARIETY NAME | | | |
| T J Seed Co. | TJS410EX | TJS 410 | | | |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) | 5. TELEPHONE (include area code) | 6. FAX (include area code) | | | |
| 6464 Liv 418 | (660) 738-4746 | (660) 646-3568 | | | |
| Ludlow, MO 64656 | 7. PVPO NUMBER | | | | |
| e e | | | | | |
| 8. Does the applicant own all rights to the variety? Mark an "X" in approp | nate block. If no, please explain. | X YES NO | | | |
| | | | | | |
| Is the applicant (individual or company) a U.S. national or U.S. based of If no, give name of country | company? | X YES NO | | | |
| 10. Is the applicant the original owner? X YES | NO If no, please answer one of the | following: | | | |
| a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? | | | | | |
| YES NO If no, give name of country | | | | | |
| b. If original rights to variety were owned by a company(ies), is(are) the | e original owner(s) a U.S. based compar | ny? | | | |
| YES | NO . If no, give name of country | | | | |
| 11. Additional explanation on ownership (if needed, use reverse for extra | space): | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| PLEASE NOTE: | | | | | |
| Plant variety protection can be afforded only to owners (not licensees) who meet | one of the following criteria: | | | | |
| If the rights to the variety are owned by the original breeder, that person must which affords similar protection to nationals of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the control of the U.S. for the same genus and the U.S. for the S. for the U.S. for th | be a U.S. national, national of a UPOV mend species. | nber country, or national of a country | | | |

- 2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to compete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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